

## Activity 2

```
root@7e83564854d0: /
PS C:\Users\Larry> docker run -it ubuntu:16.04 /bin/bash
root@7e83564854d0:/# ping
bash: ping: command not found
root@7e83564854d0:/# apt-get update
Get:1 http://security.ubuntu.com/ubuntu xenial-security InRelease [109 kB]
Get:2 http://archive.ubuntu.com/ubuntu xenial InRelease [247 kB]
Get:3 http://security.ubuntu.com/ubuntu xenial-security/main amd64 Packages [2051 kB]
Get:4 http://archive.ubuntu.com/ubuntu xenial-updates InRelease [109 kB]
Get:5 http://archive.ubuntu.com/ubuntu xenial-backports InRelease [107 kB]
Get:6 http://archive.ubuntu.com/ubuntu xenial/main amd64 Packages [1558 kB]
Get:7 http://security.ubuntu.com/ubuntu xenial-security/restricted amd64 Packages [15.9 kB]
Get:8 http://security.ubuntu.com/ubuntu xenial-security/universe amd64 Packages [984 kB]
Get:9 http://archive.ubuntu.com/ubuntu xenial/restricted amd64 Packages [14.1 kB]
Get:10 http://archive.ubuntu.com/ubuntu xenial/universe amd64 Packages [9827 kB]
Get:11 http://security.ubuntu.com/ubuntu xenial-security/multiverse amd64 Packages [8820 B]
Get:12 http://archive.ubuntu.com/ubuntu xenial/multiverse amd64 Packages [176 kB]
Get:13 http://archive.ubuntu.com/ubuntu xenial-updates/main amd64 Packages [2559 kB]
Get:14 http://archive.ubuntu.com/ubuntu xenial-updates/restricted amd64 Packages [16.4 kB]
Get:15 http://archive.ubuntu.com/ubuntu xenial-updates/universe amd64 Packages [1544 kB]
Get:16 http://archive.ubuntu.com/ubuntu xenial-updates/multiverse amd64 Packages [26.2 kB]
Get:17 http://archive.ubuntu.com/ubuntu xenial-backports/main amd64 Packages [10.9 kB]
Get:18 http://archive.ubuntu.com/ubuntu xenial-backports/universe amd64 Packages [12.7 kB]
Fetched 19.4 MB in 1min 31s (212 kB/s)
Reading package lists... Done
root@7e83564854d0:/# apt-get install iputils-ping
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libffi6 libgmp10 libgnutls-openssl27 libgnutls30 libhogweed4 libidn11 libnettle6 libp11-kit0 libtasn1-6
Suggested packages:
  gnutls-bin
The following NEW packages will be installed:
  iputils-ping libffi6 libgmp10 libgnutls-openssl27 libgnutls30 libhogweed4 libidn11 libnettle6 libp11-kit0 libtasn1-6
0 upgraded, 10 newly installed, 0 to remove and 5 not upgraded.
Need to get 1307 kB of archives.
After this operation, 3781 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://archive.ubuntu.com/ubuntu xenial/main amd64 libgmp10 amd64 2:6.1.0+dfsg-2 [240 kB]
```

### Ping installation

```
root@7e83564854d0:/# ping www.youtube.com
PING youtube-ui.l.google.com (142.250.66.110) 56(84) bytes of data.
64 bytes from 142.250.66.110: icmp_seq=1 ttl=37 time=32.4 ms
64 bytes from 142.250.66.110: icmp_seq=2 ttl=37 time=31.2 ms
64 bytes from 142.250.66.110: icmp_seq=3 ttl=37 time=31.9 ms
64 bytes from 142.250.66.110: icmp_seq=4 ttl=37 time=31.6 ms
64 bytes from 142.250.66.110: icmp_seq=5 ttl=37 time=33.4 ms
64 bytes from 142.250.66.110: icmp_seq=6 ttl=37 time=31.5 ms
64 bytes from 142.250.66.110: icmp_seq=7 ttl=37 time=32.1 ms
64 bytes from 142.250.66.110: icmp_seq=8 ttl=37 time=31.7 ms
64 bytes from 142.250.66.110: icmp_seq=9 ttl=37 time=31.3 ms
64 bytes from 142.250.66.110: icmp_seq=10 ttl=37 time=31.3 ms
^C
--- youtube-ui.l.google.com ping statistics ---
10 packets transmitted, 10 received, 0% packet loss, time 9013ms
rtt min/avg/max/mdev = 31.214/31.895/33.477/0.653 ms
root@7e83564854d0:/# exit
exit
PS C:\Users\Larry>
```

Using ping from Docker container

```

PS C:\Users\Larry> docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES
7e83564854d0   ubuntu:16.04   "/bin/bash"             11 minutes ago Exited (0) 2 minutes ago
PS C:\Users\Larry> docker commit -a 'Larry Garriz' -m 'Added ping utility' 7e83 lsgarriz/ping
sha256:aecc1a51445b073bc64add1588372f4d1fe9989c310ec286c0653fe5bd78df52
PS C:\Users\Larry> docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
lsgarriz/ping  latest   aecc1a51445b   8 seconds ago  170MB
ubuntu        16.04    9ff95a467e45   3 weeks ago   135MB
PS C:\Users\Larry> docker run -it --rm lsgarriz/ping /bin/bash
root@654dad16cac6:/# ping music.youtube.com
PING youtube-ui.l.google.com (142.250.66.110) 56(84) bytes of data.
64 bytes from 142.250.66.110: icmp_seq=1 ttl=37 time=32.7 ms
64 bytes from 142.250.66.110: icmp_seq=2 ttl=37 time=31.9 ms
64 bytes from 142.250.66.110: icmp_seq=3 ttl=37 time=30.9 ms
64 bytes from 142.250.66.110: icmp_seq=4 ttl=37 time=30.9 ms
^C
--- youtube-ui.l.google.com ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3004ms
rtt min/avg/max/mdev = 30.951/31.655/32.758/0.743 ms
root@654dad16cac6:/#

```

Creation of new Ubuntu Docker image with ping functionality pre-installed